George G. Vega Yon

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Education

Ph.D. in Biostatistics (concentration in Stat. Comp.) University of Southern California (2020). Dissertation *"Essays on Bioinformatics and Social Network Analysis: Statistical and Computational Methods for Complex Systems"*

M.Sc. in Social Sciences (Economics) California Institute of Technology (2016)

Master in Economics and Public Policy, Universidad Adolfo Ibáñez (2011)

BS. in Social Sciences and **BS. in Business Administration**, Universidad Adolfo Ibáñez (2011)

Professional Experience

University of Utah, November 2021–Present Division of Epidemiology *Research Assistant Professor*.

University of Southern California, 2015–November 2021 Department of Preventive Medicine *Research Programmer*. As a senior research staff member, my responsibilities include: Provide technical support on statistical computing, e.g., HPC, run training sessions on scientific software development, and writing scientific papers. Since August 2020, I co-instruct the Department's Introduction to Data Science class.

Chilean Pension Supervisor, August 2011– August 2014 Research Division *Analyst*. Statistical and econometric analysis on the Chilean unemployment insurance, statistical software development, serving as a bridge between the IT and Research divisions.

Nodos Chile Social Network Analysis Ltda., January 2012–January 2014 *Partner*. Founding partner of one of the first applied SNA Consultancy Entrepreneurship in Chile.

Universidad Adolfo Ibáñez, January 2011–June 2012. School of Government *Adjunct Professor*. Taught Introductory courses of Economics, Microeconomics and Statistical computing with Stata.

Chilean Ministry of Social Planning, March 2011–December 2011. Social Programs Monitoring *Analyst*. Survey and Analysis of the Government social programs supply and supporting the Monitoring Division with the Open-Data Initiative.

Software (selected)

[1] **George G. Vega Yon**. *aphylo: Statistical Inference of Annotated Phylogenetic Trees* (2022). R package version 0.2-1 URL: https://cran.r-project.org/package=aphylo. `downloads 585K`

[2] **George G. Vega Yon**. *rgexf: Build, Import and Export GEXF Graph Files* (2020). R package version 0.16.0. URL: https://CRAN.R-project.org/package=rgexf. `downloads 585K`

[3] **George G. Vega Yon**, Thomas Valente. *netdiffuseR: Analysis of Diffusion and Contagion Processes on Networks* (2020). R package version 1.22.0. URL: https://github.com/USCCANA/netdiffuseR. `downloads 33K`

[4] **George G. Vega Yon**, Kayla de la Haye. *ergmito: Exponential Random Graph Models for Small Networks* (2020). R package version 0.3-0. URL: https://cran.r-project.org/package=ergmito. `downloads 17K`

[5] **George G. Vega Yon**. *slurmR: A Lightweight Wrapper for 'Slurm'* (2020). R package version 0.4-1. URL: `https://CRAN.R-project.org/package=slurmR`. downloads 19K

[6] **George G. Vega Yon**. *fmcmc: A friendly MCMC framework* (2020). R package version 0.3-0. URL: `https://CRAN.R-project.org/package=fmcmc`. downloads 17K

Academic Publications (selected)

[1] Marian-Gabriel Hâncean, Matjaž Perc, **George G. Vega Yon**, Adrian Gheorghiță, et al. "The formation of political discussion networks". In: *Royal Society Open Science* 9.1 (Jan. 2022), p. 211609. URL: `https://royalsocietypublishing.org/doi/abs/10.1098/rsos.211609`.

[2] Marie Ouellet, Sadaf Hashimi, and **George G. Vega Yon**. "Officer Networks and Firearm Behaviors: Assessing the Social Transmission of Weapon-Use". In: *Journal of Quantitative Criminology* (June 2022). URL: `https://doi.org/10.1007/s10940-022-09546-9`.

[3] **George G. Vega Yon**, Andrew Slaughter, and Kayla de la Haye. "Exponential random graph models for little networks". In: *Social Networks* 64 (2021), pp. 225–238. URL: `https://doi.org/10.1016/j.socnet.2020.07.005`.

[4] **George G.. Vega Yon**, Duncan C. Thomas, John Morrison, Huaiyu Mi, et al. "Bayesian parameter estimation for automatic annotation of gene functions using observational data and phylogenetic trees". In: *PLOS Computational Biology* 17.2 (Feb. 2021), pp. 1–35. URL: `https://doi.org/10.1371/journal.pcbi.1007948`.

[5] **George G. Vega Yon** and Paul Marjoram. "fmcmc: A friendly MCMC framework". In: *Journal of Open Source Software* 4.39 (July 2019), p. 1427. URL: `http://joss.theoj.org/papers/10.21105/joss.01427`.

[6] **George G. Vega Yon** and Brian Quistorff. "parallel: A command for parallel computing". In: *The Stata Journal: Promoting communications on statistics and Stata* 19.3 (Sept. 2019), pp. 667–684. URL: `http://journals.sagepub.com/doi/10.1177/1536867X19874242`.

Honors and Professional Achievements

Technologies R, C++, LaTeX, SQL, python, XML, regex, Stata, VBA, Gephi, Pajek, Mathematica, git, Docker, Visual Studio Code, unix.

Book reviewer: "Microeconometrics and Matlab: An Introduction", by Adams, Clarke and Quinn, Oxford University Press, 2015. "Mastering Gephi Network Visualization", by Ken Cherven, Packt Publishing, 2015. "Network Graph Analysis and Visualization with Gephi", by Ken Cherven, Packt Publishing, 2013.

Awards Best paper, 72 ICA conference, 2022; Travel Grant, Society of Young Network Scientist, 2019; Fellowship, California Institute of Technology, 2014; Scholarship, Adolfo Ibáñes University, 2006.

Manuscript reviewer The Official Journal of The Society for Computational Economics, The R Journal, Social Networks, Journal of Mathematical Sociology, Journal of Open Source Software, Bioinformatics, Computer Methods and Programs in Biomedicine Update, American Statistical Association, SUNBELT Conference (2016), International Conference on Computational Social Science (2019–2021).

Misc Founder of the R Users Group in Chile (2013), co-organizer of the East LA R User Group (LAERUG).